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The Future of the Sino-American Co-Dependency

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THE FUTURE OF THE SINO-AMERICAN CO-DEPENDENCY

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ABSTRACT

The crisis of 2008 has shown the unsustainability of the global imbalances centered on the US-China symbiotic relationship that characterized the previous decade. This has revived the so-called growth-rebalancing debate. In particular, the new emerging consensus calls for a re-orientation of the US economy away from consumption and toward exports, and for policy shifts that can help China to reduce its dependence on external demand and inefficiently high rates of capital accumulation. In this essay, we discuss the economic and political feasibility of the proposed patterns of re-adjustment by focusing on the short- and long-term trade-offs faced by the policy-makers. We argue that the rebalancing will be gradual and partial because of the costs associated with a radical shift in the growth strategies of both countries. We also believe that this scenario will be consistent with a world economy expanding at lower rates than in the past decade.

Keywords: Growth strategies; Global imbalances; Sino-American co-dependency; Growth Rebalancing

JEL codes: E42, F33, F41, F43**,** O41

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1. Introduction♠

The United States has accumulated persistent and large current account deficits *vis-à-vis* the rest of the world in the last three decades. This phenomenon, however, has accelerated remarkably since the early 2000s, especially due to the different growth models characterizing, on the one hand, the US and, on the other hand, many developing countries. In particular, the relationship between the US and China has heavily influenced the evolution of global imbalances in the last decade and, as we shall argue, it will continue to do so also in the future.

By preserving an undervalued exchange rate, China has so far managed to boost its high-productive exporting sectors, foster the growth of GDP, attract FDI, and absorb a large amount of rural workers in the modern sectors of the economy, thus facilitating the process of urbanization. To implement this regime, the authorities have strictly controlled the exchange rate (mainly against the US dollar), limited the degree of international capital mobility, maintained a high degree of domestic financial repression (also to facilitate the sterilization of foreign reserves), and guided the allocation of domestic investment among alternative uses.[1] High domestic saving and a politically-driven allocation of credit would have led to a serious misallocation of capital and expanding nonperforming loans in China, had it not been for the stable exchange rate and for the consequent opportunities of exporting to the US market. The US, in its turn, has exploited the Chinese willingness to finance its current account deficits to maintain high domestic consumption, while ensuring low interest rates and subdued inflation. The US financial sector, in addition, has flourished thanks to the profitable intermediation of Chinese saving and to the fees associated with the issuance and the placement of a fast-growing amount of private debt.

Dooley et al. (2003, 2004a,b, 2009) have diffusely analyzed the features of such Sino-American arrangement and argued that it represents the core of a new international monetary arrangement, also know as Bretton Woods II. Be this latter observation as it may, the Sino-American arrangement has been certainly crucial for the successful development strategy in China and for the expansion of consumption in the US. The crisis of 2008, however, has made apparent that the size of the imbalances could not remain as those in the preceding years. Were this the case, the US would eventually face the reduction of the relative size of its economy, the decline of its manufacturing sector, and the risk of a reproduction of its recent internal problems, such as excess

♠ We would like to thank CEIC Data for their kind assistance in providing data on the Chinese economy.

[1] Reserves accumulation has been pursued also for a self-insurance motive, as globally integrated developing economies tend to face foreign exogenous shocks and potential reversals of private capital flows. See Aizenman and Lee (2007,2008), Dooley et al (2004c), Jeanne and Ranciere (2008).

liquidity, overleveraging, underpricing of risk, and low saving (see, on this, Obstfeld, 2010). China, in turn, would face permanently subdued domestic consumption, rising sterilization costs, very limited monetary policy independence, and mounting risks of overinvestment and capital misallocation.

In the last few years, several studies have advocated policy shifts aiming to rebalance Chinese growth away from external demand, investment and current account supluses, and toward domestic demand, consumption and services (see Aziz, 2006; Blanchard and Giavazzi, 2006; Guo and N'Diaye, 2009b; Kuijs and Wang, 2006; Lardy, 2006; Makin, 2006; Prasad, 2009; Prasad and Rajan, 2006; Straub and Thimann, 2009; Zheng et al., 2009). More recently, scholars and a part of the economic press have emphasized that the US needs change as much as China does: global rebalancing has to be accompanied by an internal rebalancing in the US, whereby the country becomes less dependent on domestic consumption and debt, and more oriented toward exports and saving.

While it is certain that large imbalances can hardly be maintained, we claim that an improper rebalancing of the Sino-American relationship may bring about also costs to both countries. For sure, a rapid closure of the imbalances will permanently reduce the room for China's export-led growth strategy and for the expansion of US consumption. *Ceteris paribus*, this will most likely lead to unpleasantly lower rates of growth in both countries.[2] In addition, such a dramatic shift in the countries' models of growth may have unpleasant structural effects.

The negative implications of a correction in the Chinese policy mix on the economy's longer-term growth prospects and on the ongoing structural change driven by the export-led growth have already been discussed in the literature (see, for instance, Bonatti and Fracasso, 2009,2010; Hua, 2007; McKinnon 2006,2007; McKinnon and Schnabl, 2009; Rodrik, 2009a,2009b). As the key to China's buoyant growth has been the rapid transition into producing tradable products, a dramatic switch in the Chinese model of growth which holds back the process of structural change may reduce the economy's longer-term growth rate and may also complicate the mobilization of the Chinese labor force away from the backward sectors of the economy.

What has been less debated in the literature, instead, is that down-sizing the Sino-American imbalances might have unpleasant consequences on the US consumers - whose consumption opportunities will shrink as Chinese policy-makers slow down the financing of the US current account deficits – and of the US workers - as making the US economy less dependent on domestic

[2] Similarly, Blanchard and Milesi-Ferretti (2009) argue that failure to properly address the determinants of the global imbalances in the last 10 years (which, as also done in Fracasso, 2007, they distinguish from the determinants of the imbalances in the 1990s) may lead to the world economy toward a low-growth trajectory.

consumption and more oriented toward exports might bring about a relative shrinking of those labor-intensive nontradable sectors that provide most jobs in the country (see Bonatti and Fracasso, 2010). The US workers may face an even gloomier scenario if the American policy-makers in order to rein in fiscal deficit will drastically cut government expenditures that usually mainly fall on nontradable products.

Thus, the US and China face serious challenges in choosing and implementing new growth strategies that are economically feasible, politically viable and compatible with each other and with the rest of the world. While it is reasonable that both China and the US will adopt measures with a view to preventing global imbalances from widening again, they should use great care in choosing the combination of policy interventions to achieve this result. Down-sizing the US deficits and redressing the imbalances, in fact, will be a difficult and politically costly task.

The remainder of the paper proceeds as follows. After having offered a few stylized facts on the Sino-American co-dependency (Section 2), we shall point out the economic and political economy trade-offs faced by China and the US (Section 3) in either maintaining or moving away from their current growth strategies. Section 4 will conclude.

2. Stylized facts

Both the US and China have run increasing trade and current account imbalances since 2003, but for the recent and probably temporary reduction following the financial crisis. In 2007, the Chinese current account surplus exceeded 10% of GDP and the US deficits reached 6% of GDP in 2005 and 2006 (Figure 1).

While China accounted for about 20% of the US deficits in early 2000s, its share has raised to above 40% in more recent years: China's vantage position in international manufacturing supply chains has increased its relative share of the total US trade deficit and reduced the share ascribable to the other Asian countries. Even though these figures shrunk in 2009 because of the consequences of the global crisis on GDP and trade, imbalances have not necessarily started a permanent process of decline: the reduction in the size of the imbalances, in fact, is most likely the by-product of the greater decline observed in trade figures than in the values of GDP.[3] In addition, the US continues to account for three quarters of the Chinese trade surplus.

[3] Baldwin and Taglioni (2009) show that the interaction of the demand shock provoked by the financial crisis with the composition of trade and GDP (i.e., the latter involves a larger proportion of postpone-able products than the former) exaggerated the fall in trade values and also reduced the external imbalances. While GDP growth in China was barely dented (also thanks to the fiscal stimulus package put in place by the Chinese authorities), its exports fell by almost 15%.

While both the public and the private sectors have recorded external deficits in the US, only the official sector in China has been allowed to intermediate capital abroad.[4] The Chinese monetary authorities, charged with investing both large current account surpluses and capital inflows, have accumulated foreign reserves, mainly denominated in US dollars.[5] Prasad and Sorkin (2009) estimate that the current account surpluses accounted for 91% of the accumulation of reserves from 2004 to 2008. In early 2010, thanks to the large purchases of foreign currency in the course of 2009, Chinese reserves reached almost $2.5 trillion, about 50% of domestic GDP.[6] On the contrary, the net international investment position of the US has worsened over time notwithstanding favourable valuation effects and capital gains: the latter have in fact prevented a dramatic worsening of the US net foreign position and guaranteed a positive return differential.[7]

Chinese reserves have been typically concentrated on US Treasury (UST) securities. China's holdings amounted to $60bn in 2000, $400bn in 2006, and have fluctuated around $900bn in the second half of 2009. The Chinese net purchases of long-term US Treasury bonds and notes accounted for about 30% of all countries' purchases in 2008 and 2009. The relative importance of China among the foreign owners of US Treasuries has also constantly grown (see Figure 2). The share of foreign-owned US assets in Chinese hands ($1.7 trillion in November 2009) is even greater if one looks at long-term US Agency bonds, while it is much less pronounced for short-term debt, corporate bonds and equity (see Figure 3).

Until 2008, to hold down liquidity growth while accumulating reserves, the Chinese authorities undertook a massive sterilization effort. In 2002, the People's Bank of China (PBC) started issuing RMB-denominated sterilization bills which the Chinese banking sector has been forced to buy: local commercial banks have been required to keep part of their own reserves in

[4] Even though the outflows of capital have been almost liberalized already in 2007, the expected appreciation of the renminbi has restrained domestic investors from bringing capital abroad and, *de facto*, financial flows have remained mainly inward-oriented. Precisely to limit the inflow of money, China tightened the rules on foreign-currency transfers by individuals on November 25th, 2009.

[5] It is widespread opinion that 60%-70% of the Chinese foreign reserves is denominated in US dollars.

[6] Chinese total reserves may in fact be even larger if one considers that a) the People's Bank of China has controlled the Chinese banks' external asset purchases, b) a Sovereign Wealth Fund (CIC) financed with $200 billion of official reserves was established in 2007, and c) non-Chinese intermediaries have purchased a great amount of foreign assets on behalf of the Chinese public sector.

[7] The US has profitably intermediated the resources coming from emerging markets: it has gathered foreign saving by issuing liquid and low-yield securities, and reinvested them in more profitable domestic and foreign direct investments. See Caballero et al (2008), Dooley et al. (2007) and Mendoza et al. (2009) on the US intermediary role and Gourinchas and Rey (2007a,b) and Tille (2008) on the return differential and valuation effects.

dollars and to accumulate sterilization bills (up to 40% of total reserves in 2007).[8] The issuance of sterilization bonds has been suspended from 2008 to April 2010 as the authorities aimed to let the liquidity grow as a means of stimulating the economy.

In 1994, after having abolished exchange rate controls on current account transactions, the Chinese authorities pegged the renminbi at 8.28RMB per dollar: this undervalued exchange rate has helped China to expand its tradable sector while anchoring the domestic price level. To avoid a too fast growth of the domestic liquidity, incompatible with a low inflation environment and allegedly conducive to domestic asset bubbles, in 2005 the authorities allowed for a limited appreciation of the currency and switched to a managed float with reference to a basket of currencies. As a result, in the three year period from July 2005 to July 2008, the renminbi gained 20% against the dollar. Since mid-2008, the RMB has been re-pegged to the dollar at 6.83RMB per dollar, probably as a response of the Chinese authorities to the short-lived appreciation of the dollar against most currencies due to the unwinding of carry trade positions and the diffuse sales of foreign-currency assets to pay back dollar-denominated debts (Figure 4).[9] Accordingly, the Chinese and American effective exchange rates appreciated hand in hand on a trade weighted basis until 2005[10], they diverged in the period 2005-mid2008 and went back to a common depreciating pattern since mid-2008.

The overvaluation of the dollar against the renminbi (whose extent varies a lot across studies aiming to estimate the equilibrium exchange rate) appears more clearly if one considers the evolution of the wage differential in dollars between the US and China.[11] As argued in Ferguson and Schularick (2009), while the nominal exchange rate has depreciated by 15% in the period 1998-2008, relative unit labor costs have decreased in China by 40%: even controlling for differences in labor productivity, closing the competitiveness advantages enjoyed by the Chinese manufacturing firms would require an appreciation of the renminbi of 40%-50%.[12]

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[8] See Cappiello and Ferrucci (2008), Zhang and Pang (2008) and Zhang (2009) for the evolution of monetary series.

[9] The inception of the financial crisis led to a short-lived recovery of the dollar in the second half of 2008, but the depreciating trend started again in early 2009 when these hot money flows into the US abated (Bénassy-Quére et al., 2009; Frankle, 2009; Frankel and Wei, 2007; Fratzscher, 2009).

[10] Fracasso and Schiavo (2009) show that the effective depreciation of the USD until 2006 was substantial against the currencies of the major partners, but not concentrated on the countries with the largest bilateral surpluses.

[11] See, for instance, Cheung et al (2007), Cline and Williamson (2009), and Ferguson and Schularick (2009).

[12] Banister and Lett (2009) estimate that average hourly compensation costs for China's manufacturing sector in 2006 were $0.81. This amounts to 2.7% of the average costs of manufacturing employees in the United States. While this ratio has increased in the period from 2002 (when manufacturing employment expanded again) to 2006, part of this catching up is due to the appreciation of the renminbi rather than to the increase in compensation costs.

Naturally, current account imbalances have reflected the differentials in saving and investment patterns in each of the countries. Domestic saving in China has typically been very high (above 40% of GNI in early 2000, it touched 50% in 2007), while investment, notwithstanding a steady growth in the last decade, has never reached the same level. Chinese saving surpluses in the period 2000-2008 amounted to almost $1.4tn. The contrary holds for the US whose net borrowing needs have risen up to 5-6% of gross national income in recent years. The US outspent its national income for several years in a row, thus accumulating more than $4.5tn of saving deficits in the period 2000-2008.

As anticipated, the Sino-American co-dependency owes much to the extraordinary high saving and investment rates in China. The export-led growth cum reserve accumulation strategy pursued by the Chinese authorities has both required and entailed high personal saving over time: i) the currency has remained undervalued; ii) households have faced serious borrowing constrained, and iii) the social safety net (with the so-called "breaking of the iron rice bowl" system) has become weaker (see Blanchard and Giavazzi, 2006; Chamon and Prasad, 2010).[13] Two demographic changes in the population have also contributed to increase domestic saving: i) a rapidly falling youth dependency ratio pushes saving (Ma and Haiwen, 2009)[14] and ii) families with a son accumulate precautionary wealth to compete in the 'marriage market' given that, also as a result of selective abortions, young men outnumber young women (see Wei and Zhang, 2009).[15]

Chinese enterprises have also accumulated high saving through retained earnings, which have risen as firms' profits, capital intensity and labor productivity have grown fast over time. Private entrepreneurial firms – at risk of being financially constrained because of the limited access to the political-driven banking system – have accumulated precautionary savings and invested in their own capital expansion.[16] State-owned enterprises, on their part, have typically not distributed dividends (although firms operating in rapidly expanding list of sectors have been recently required to do so) and re-invested in physical capital their profits, thus contributing to keep high both domestic demand and production capacity.

While the US gross capital formation remained stable in the period 2000-2008, domestic saving steadily fell: net private saving halved, net government saving turned negative and net

[13] These explanations are not mutually exclusive and they contribute to explain saving patterns in different times.

[14] Using micro-data, Horioka and Wan (2007) and Chamon and Prasad (2010), however, reach different conclusions on the empirical relevance of dependency ratios to explain saving patterns.

[15] According to Wei and Zhang (2009) the sex ratio has climbed from 106 boys per 100 girls in 1980 to 124 in 2007.

[16] Song et al (2009) discuss the importance of the borrowing constraints faced by small private firms in China. Interestingly, Aziz and Cui (2007) argue that borrowing constraints and undistributed profits are also responsible for the decline of household income share (and in particular of the wage income share) in GDP.

corporate saving did not compensate for the reduction in the other two. The reduction in personal saving and the stability of investment may be partially accounted for by the presence of a housing and credit bubble. Households' borrowing and debt growth started abating in the third quarter 2008 and private saving increased in 2009, as households tried to rebuild part of the lost financial wealth and to service the debt (see Figure 5).[17] Such additional saving has been smaller than the increasing borrowing needs of the public sector: most likely, the US is going to remain a net borrower from the rest of the world also in 2010. The sum of household and federal government borrowing in credit markets has not changed much in the last few years: $1.48 trillion in 2005, 1.36 in 2006, 1.1 in 2007, 1.26 in 2008 and 1.20 in 2009.

Until 2008, both China and the US enjoyed satisfactory rates of growth. In the US, this result was in great part due to the expansion of the housing sector and of private consumption, while net exports fell and investment remained constant. Though hit hard by the crisis, the US seems to have started recovering in 2010, thanks to the domestic fiscal stimulus package the accommodating monetary policy. In China, overall real GDP growth has remained above 8% in the decade (above 10% from 2004 to 2007) and foreign demand, directly and indirectly, has played a crucial role in this process. Growing exports have pushed up the demand for domestically produced goods and have attracted large foreign investment in the tradable sector, which, on their part, have boosted business and consumer confidence. Guo and N'Diaye (2009) estimate that export and investment linked to the tradable sector accounted for 60% of GDP growth during 2001-2008, up from 40% in the 1990s.[18] As said, final consumption growth in China was instead muted as a result of a declining share of households income in GDP coupled with high personal saving (on this, see Aziz and Cui, 2007).

[17] According to the Flows of Funds data (table B.100), released in December 2009, household wealth was equal to $64.5 trillion in 2005 and 2006 (almost 6.5 times the personal disposable income), fell to $48.5tn in the first quarter of 2009 and recovered up to $54.2tn (just below 5 times the personal disposable income) in the fourth quarter of 2009.

[18] The contribution of exports to Chinese growth is highly debated as growth accounting exercises do not pick up the respective shares of value added ascribable to domestic production for foreign and internal demand. Some authors have looked at the input-output structure of the Chinese economy and separated ordinary and processing exports because of their different implications in terms of value added and employment creation (see Feenstra and Hong, 2007; Koopman et al., 2008; and He and Zhang, 2010). According to these studies, Chinese exports have been less important than usually believed. These findings, however, employ a static analysis (as final domestic demand is treated as exogenous), use 2002 I-O tables and, furthermore, do not consider direct and indirect implications that an outward-oriented production system typically has on regulatory reforms, technological transfer, competition-induced efficiency gains and total factor productivity growth.

3. Growth strategies and trade-offs

3.1 China

In recent years, several studies have advocated policy shifts that may help to rebalance Chinese growth. As discussed in the introduction, this strand of the literature has correctly pointed out that the growth strategy pursued so far by China entails costs (and risks) that increase with the size and the duration of the imbalances. Accordingly, many scholars have argued that China's growth should move away from heavy dependence on external demand, investment and industry, and toward domestic demand, consumption and services.

As to the implied costs of this strategy, the continuation of the export-led *cum* reserve accumulation would require the maintenance of a permanently subdued levels of household consumption and income, the preservation of strict capital restrictions, the further exposure of the value of the reserves to the oscillations of the dollar, the maintenance of low interest rates to keep compressed the cost of investment, and the subjugation of the domestic banking sector to the political leadership. While in the past the opportunity costs of this strategy were lower than the gains obtained from mobilizing the rural population in the modern sectors of the economy, in the future this is not likely to be the case.

In the past, for instance, the sterilization of reserves has been facilitated by the high return differential between US bonds and PBC sterilization bills and by the high degree of financial repression in China.[19] But sterilization costs are doomed to increase: the direct (quasi-fiscal) costs of this practice will go up if the US interest rates will remain low for a long period; moreover, the (indirect) costs (e.g., a liquidity overhang in the banking system; widespread asset portfolio distortions; currency and maturity mismatches in banks' assets and liabilities; the inability of the authorities to liberalize the domestic interest rates) will increase with time and with the size of the expected appreciation of the renminbi. In addition, a prolonged undervaluation of the currency would attract large speculative capital flows into China if investors start doubting its sustainability, thereby increasing the amount of reserves to be sterilized, as happened in 2003-2005 before the exchange rate regime shift (discussed in Section 2).[20]

[19] See Aizenman and Glick (2009), Greenwood (2008), and McKinnon and Schnabl (2009). Until 2008, to control liquidity growth, the Chinese authorities resorted to restrictive administrative measures and used "moral suasion" to convince banks to buy sterilization bills and hold PBC reserves remunerated at rates lower than the market ones: interest rates could not be raised as this would have attracted capital inflows and increased the costs of sterilization.

[20] As market participants anticipated the appreciation of the RMB, net financial inflows doubled in 2004. Foreign investors' prophecy was self-fulfilling: the Chinese authorities were forced to revalue as they were both facing troubles in sterilizing the inflows and losing any monetary policy independence. China also endured international political

In addition, the maintenance of the export-led growth strategy is likely to be more difficult in the future than it was in the past because of the enlarged size of China's economy.[21] The country has grown very rapidly and a further expansion of its market shares cannot but cause serious reductions in those of its competitors. As the support for free trade has declined among people and policy-makers in developed countries, the Chinese attempt to penetrate further into foreign markets could lead to a protectionist backlash, which would eventually reduce the opportunities for China.[22]

Similar considerations hold for the maintenance of high domestic saving and investment in China. Keeping investment high has typically required both high retained earnings of the corporate sector (above 20% of GDP), in particular of state-owned enterprises, and low (if not negative) real interest rates: these, as well as the depreciated currency, have contributed to compress household income and consumption to an extent that might be hardly maintained by the Chinese leadership in the future. As ever more often reckoned by the elite of the ruling party, some social and economic reforms will have to take place before economic and social imbalances become entrenched.

As argued by Yao (2010), the probability that the current policies that Beijing adopts to promote GDP growth may infringe on people's economic and political rights is growing over time. It is thus likely that the authorities will push for the development and the liberalization of the domestic financial sector, the privatization of state-owned enterprises, and the establishment of a more generous and inclusive social safety net. As these changes will contribute to reduce domestic saving, China might eventually slow down the accumulation of current account surpluses, thus simultaneously redressing its external and internal imbalances. This, of course, will occur if investment will not decrease as much as saving, which could however happen as a by-product of the attempt to achieve greater capital efficiency.[23]

While acknowledging that the preservation of the strategy adopted so far is difficult, in what follows we shall offer arguments on why we tend to exclude the occurrence of a rapid and abrupt change in the Chinese growth strategy. The literature advocating a change in Chinese policies

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pressures to make more flexible the currency, whose undervaluation was held responsible for the bad fortune of US and European exporting sectors.

[21] China has a very large productive capacity in several manufacturing sectors: as to steel capacity, for instance, China overcomes the US and the EU in both total and per capita terms.

[22] Bown and McCulloch (2009) discuss the WTO-consistent trade policy measures that the US has adopted to slow the growth of its trade imbalances with China.

[23] The debate on the prospective size and growth of Chinese investment is still open. While Dollar and Wei (2007) and Hsieh and Klenow (2009) argue that a more efficient allocation of capital could limit over-investment without denting economic growth, others observe that investment remains profitable (Bai et al., 2006) and that its allocation has improved over time (Song et al., 2009). It should however be noticed that, even though total investment may remain high, its growth in the future can hardly occur at rates similar to those observed in the most recent years.

overlooks that the key to China's buoyant growth is the rapid transition into producing tradables (mainly manufactures): a premature correction in China's policy mix which slows down this process of structural change may result in the reduction in the economy's longer-term growth rate (Rodrik 2009a,2009b).[24] This would be incompatible with the goal of fostering the employment of rural workers in the modern sectors of the economy and with other foreign policy objectives. If investment and external demand will diminish as advocated by those claiming a reduction in the domestic Chinese imbalances, Chinese consumption will have to growth 5 times faster than in the past in order to preserve the overall growth rates around 10%: this can hardly materialize, in particular if the household income to GDP ratio will keep on shrinking as it has done since 1999.[25]

Moreover, as argued by the PBC Governor, Mr Zhou Xiaouchuan, the abovementioned reforms and changes in the habits and practices of households, enterprises and institutions will be only gradual, as they are well entrenched (as in the case of households' habits) and, taken together, have served well the multifaceted development goals of the Chinese authorities. The financial sector will most likely remain repressed as this condition facilitates capital and liquidity controls, reserve sterilization, and the sectoral and geographical allocation of capital. Similarly, the influence of local authorities on banks is unlikely to be relieved soon as this represents a key tool for them to boost local economic performance, which contributes to their visibility before the central government and enhances their chances of being re-appointed. Finally, an untimely change in the growth paradigm that reduces growth by few percentage points may turn out to be politically unsustainable even more than a maintenance of subdued household consumption: a serious restructuring process will most likely imply (at least in the short term) job dislocations and losses, rising unemployment, cross-regional migration, the closure of banks exposed to the recent boom in credit and asset prices, and the reduction of the municipalities' control on corporate investment.

We thus doubt that the national authorities are ready to accept the political consequences of a dramatic revision of their growth strategy because they are hardly compatible with the need of equalizing the standards of living across the provinces while preserving a leading political and economic role in the region. In March and April 2010, when the US Administration announced to

[24] Consistently, the exchange rate regime switch in 2005 was neither abrupt and nor profound: the authorities were concerned about the negative valuation effects of a large depreciation of the dollar (which would have hit both the official reserves and the US assets held by the commercial banks) and about the future of the export-oriented manufacturing sector (see McKinnon, 2006; McKinnon and Schnabl, 2009).

[25] Bonatti and Fracasso (2009) build a theoretical model to interpret the Sino-American co-dependency and evaluate some different future scenarios depending on whether China liberalizes the capital account and floats the currency, on its fiscal policies and on the timing of the regime switch. Other theoretical works on the structural change in China are Lipschitz et al. (2009) and Song et al. (2009).

postpone the release of the Treasury report on exchange rates in which many had expected China to be labeled as a currency manipulator, official and unofficial statements by various Chinese officials were contradictory: some declared that the country would move soon toward a more flexible/market-oriented exchange rate, and others maintained that China would not give in to US pressures on the exchange rate as these latter impinge on China's sovereignty and on its growth strategy. Accordingly, while a resumption of the pre-crisis gradual appreciation of the renminbi seems very likely, the complete abandonment of the current model of growth is more economically and politically controversial.

This does not entail that there are no important signals that the Chinese authorities are pondering a change in their strategy. During the last few years, the monetary authorities in China have repeatedly changed the composition of their purchases of US assets and publicly expressed their reservations on the effects of the US quantitative easing on the real value of US foreign debt. Moreover, during the first half of 2009, the authorities took actions to encourage the international use of the renminbi: they established bilateral local currency swaps (for more than RMB600bn) with some commercial partners; started pilot programs using the renminbi in cross-border settlements; promoted investment opportunities in Hong Kong for foreign holders of renminbi; participated in regional monetary cooperation and reserve pooling arrangements; diversified the reserves by agreeing in purchasing IMF SDR-denominated bonds (thus asking more voice, power and representation in the IMF and WB); and put forward the proposal of introducing a "super-sovereign" reserve currency in place of the US dollar.[26] Finally, the PBC governor proposed that G20 countries establish a "supra-sovereign-wealth investment fund" to invest foreign reserves in developing countries, and, in a similar vein, the influent economist Xu Shanda, in mid-2009, argued that China should create a Marshall plan of $500bn to lend money to developing regions.

This notwithstanding, one can find opposite signs showing that China is not yet ready to adopt a new growth strategy. Despite the crisis, US-dollar denominated Chinese reserves have continued to grow in 2009 as the Chinese authorities, albeit concerned about the security of their US investments, could not but buy US assets (flows) to prevent a sharp reduction in the value of their current holdings (stocks). In addition, at the APEC meeting in mid-November 2009, the Chinese authorities made clear that a revaluation of the renminbi, though possible, would not be immediate and certainly not a matter of regional policy coordination. Moreover, despite much debate, the diversification of the reserves has remained limited: there are neither many alternative currencies to the dollar and the euro, nor many financial markets that are deep and liquid enough to bear the impact of a diversification of $2.5bn worth of reserves. No major changes have been

[26] See Zhang M. (2009) for a discussion of the China's new international financial strategy.

implemented in China to reduce the degree of financial repression, which guarantees that the sterilization costs remain low.

It is also worth noticing that the tertiarization trend in China has been strong in terms of employment, but not significant in terms of real value added. As labor productivity has stagnated in the tertiary sector, relative prices have boomed (see Cheng and Blanchard, 2009) thus explaining the growing share of services in the households' consumption baskets. If this structural gap in the evolution of relative prices is going to continue, a limited increase in domestic demand may not be sufficient to compensate the reduction of foreign demand for tradables, especially because Chinese trade flows have concentrated more on manufactures (above 85% since 2001) than on services.

In light of all these considerations, we believe that the proposals of establishing a "Chinese Marshall plan" and a "supra-sovereign-wealth investment fund" are not only driven by the desire of diversifying the accumulated reserves and extending the international adoption of the renminbi. They are also (and foremost) meant to expand the export markets for China in the attempt to preserve an export-driven model of growth. The authorities most likely believe that: a) exports still remain indispensable to ensure/absorb the growth of domestic production; b) mature markets alone, even leaving the contractionary effects of the crisis aside, cannot allow for a further expansion of Chinese market shares; c) domestic demand in China is not going to increase as much as necessary to absorb the growth in domestic production consistent with the labor mobilization goals of the authorities; d) expansionary economic policy measures cannot sustain domestic growth without also feeding financial bubbles and inflation. These proposed solutions would allow China to differentiate the denomination of its reserve holdings and the destinations of its products, while simultaneously maintaining an export-led growth strategy.

It has been argued that, with the measures adopted to tackle the global economic crisis, China has already switched away from export-led growth: a massive fiscal stimulus package and an extremely loose monetary policy, accompanied by restrictive trade and procurement measures, have fostered domestic demand after the collapse of external trade.[27] Government's extraordinarily expansionary measures, however, do very little to lessen the internal imbalances in China. Quite on the contrary, they have probably contributed to make domestic imbalances worse, as they i) boosted

[27] The fiscal stimulus package amounted to 4 trillion of renminbi (about $575billion). This implies a central government intervention as big as 15% of China's GDP, about three times the stimulus measures adopted by the US. To this, one should also add the local stimulus plans (mainly financed through banks' loans) which, combined all together, appear to be as large as the central government's package. During 2009, the Chinese government encouraged commercial banks to concede generously credit to the private sector: loans reached 9 trillion of renminbi ($1.4tn), 30% more than the year before. Mortgage lending increased of over 40% and property development loans of about 30% in the course of 2009: as a consequence, property sales and prices have skyrocketed during 2009.

fixed asset investment (from 42% to 47% of GDP in 2009); ii) increased the size of banking loans (in particular to state-owned companies) and of prospective non-performing loans (due to excess industrial capacity); and iv) fed the increase in the price of financial and commodity-related assets.[28] With the exceptions of a tax cut on the purchases of certain vehicles and of increased bank-financed borrowing by households, none of the expansionary policy measures has produced the much desired and publicly advocated *permanent* increase in Chinese households' consumption, also because of their temporary nature. Moreover, as discussed in He et al (2009), the fiscal stimulus has mainly fallen on sectors (and geographical areas) others than those in which most of the crisis-induced 20 million job-losses materialized: once the stimulus will start abating, it is possible that problem regarding the sectoral allocation of employment will emerge. As of early 2010, the expansionary stance of monetary policy has already been reverted to prevent the overheating the economy and the credit-driven inflation of property prices: fiscal policy is expected to follow a similar pattern.[29] Thus, it should be clear that neither the stimulus package nor its unwinding do signal any permanent switch in China's growth strategy.

3.2 United States

In parallel with the debate on the alleged necessity of a change in China's growth model, policy makers and commentators are invoking the need for the United States to re-orient its economy away from consumption and toward exports. It is argued that the current improvements in the US external deficits are mostly the transitory side effects of the international trade collapse: in the absence of some major shift in US policies the recovery of trade flows will probably return the US to its pre-crisis path (Baldwin and Taglioni, 2009) and the global macroeconomic conditions that brought on the current crisis will be replicated. The risk of a new, even more devastating crisis will be exacerbated (Bergsten, 2009b). Furthermore, if the US external deficit climbs again to its pre-crisis level, the consequent rapid increase in foreign indebtedness is deemed to have serious long-term implications for the American power positions in world affairs (Posen, 2009). In fact,

[28] See Pettis (2010) on this. For a contrarian view, instead, we refer to Lardy (2010).

[29] Since late 2009, banks have been urged to reduce rapidly the size of their loans (and, not surprisingly, commercial bank loans have slowed substantially in early 2010). The China Banking Regulatory Commission reinstated mandatory lending quotas, increased the required reserve ratio by 50 basis points in January and February, and disallowed subordinated debt as a source of two-tier capital (which contributes both to increased required reserves and restrain new loans). By the same token, in mid-April 2010, the central government required its banks to review off-the-book loans to local governments. On April 8, 2010, the PBC started selling sterilization bills (worth around 15 billion of renminbi) again, a practice suspended on June 2008 to allow the expansion of liquidity in the economy.

prolonged and large negative income transfers to the rest of the world - which Bergsten (2009b) estimates might reach 7% of GDP in 2030 - cannot but reduce the living standards in the US.[30]

Avoiding this scenario, therefore, should be a priority for the US policy makers not only because of the risks that it implies for the economy, but also for its long-term consequences on American national security.[31] The balancing of the federal budget is the policy instrument that is advocated for achieving that structural reduction in absorption and increase in national saving which can prevent a persistent build up of external deficit and debt (Bergsten, 2009a): the fiscal stimulus, which is likely to remain above $500 billion for some years, created a large fiscal deficit which contributes to worsen the borrowing needs of the country. Consistently with this standpoint, the US authorities should also encourage the process whereby other currencies will increasingly flank the dollar as reserve currency, so as to drain that source of demand for US assets which pushes up the dollar's exchange rate, "hurting US competitiveness and creating even larger US external deficits" (Bergsten, 2009b). In other words, a reduction of the "exorbitant privilege" enjoyed by the US because of the international status of the dollar is judged necessary for curbing the American tendency to act as the "world consumer of last resort".

The issue then boils down to whether the US authorities and private sector will adapt and set in the abovementioned rebalancing process. Available data on both public and private consumption do not suggest this is in fact the case. To start, retail sales have grown fast in early 2010, making up for more than half of the drop recorded since mid-2008, and also personal consumption expenditures have recovered. Accordingly, since late 2009, personal saving (i.e. disposable income minus total personal outlays) as a ratio of disposable income has declined to pre-crisis level (see Figure 6). This is not surprising in light of the non-negligible, though modest, employment gains in early 2010 and the positive wealth effects experienced since the second half of 2009. In addition to this, federal government fiscal deficits have expanded and, as we shall discuss below, they will very hardly shrink in the years ahead.

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[30] Before the crisis of 2008, some economists (Cooper, 2006; Hausmann and Sturzenegger, 2006) argued that the positive income balance in the US was a convincing proof that the imbalances were not a disequilibrium condition, and certainly not bad for the US. As argued elsewhere (Fracasso, 2007), this conclusion was grounded on the assumption that what occurred in the last decade would have been permanent simply because it had been long lasting.

[31] Under this respect, it is apparent the analogy with the American dependence on imported fossil fuels: in evaluating the convenience for the US to incur the short-term costs necessary to diminish this dependence, it is often stressed that one should consider not only the long-term economic benefits of diminishing this dependence, but also the strategic dividends coming from a reduced exposure to conflicts in regions involved in the production and transportation of gas and oil.

In March 2010, the Congressional Budget Office (CBO) released an analysis of perspectives for the budget and the economic outlook both assuming unchanged legislation and incorporating the President's budgetary proposals for the Fiscal Year (hereafter FY) 2001. Assuming unchanged legislation, the federal government deficit, equal to 3.2% of GDP in FY2008, passed 10% of GDP in FY2009 and is projected to decline in 2010 and level out at 3.1% of GDP in FY2013 (above $500bn).[32] The federal debt held by the public, amounting to 40.8% of GDP at the beginning of 2008, is expected to reach $10.5tn in 2012 (i.e., 67% of GDP) and then stabilize between 65% and 70% of GDP in the following years. These projections would imply that the net interest rate payments on the debt held by the public will more than double in terms of GDP in 2019 with respect to 2009.

As said, these projections do not encompass prospective policy changes: they build under the assumptions that certain tax provisions (as those enacted in the Economic Growth and Tax Relief Reconciliation Act of 2001, the Jobs and Growth Tax Relief Reconciliation Act of 2003, and the American Recovery and Reinvestment Act) expire as scheduled, assume that discretionary spending rises at the rate of inflation, and do not take into account the Health Care Legislation, the reform of the US international tax system, the Build American Bonds Program, and other proposal affecting spending and revenues. Once the implications of the President's proposals for the FY2011 are taken into account, the CBO projections change: the federal deficit is expected to grow above 10% of GDP in FY2010, steadily decline toward 4% in FY2014 and then increase up to 5-5.5% in the following fiscal years. By the same token, the debt in public hands is expected to reach 70% of GDP in 2011 and 90% in 2020.[33]

Although the rhetoric of the Obama administration seems to indicate that a re-orientation of the US growth model is in its agenda,[34] one could doubt of the political and economic feasibility of the structural adjustment that this re-orientation would make necessary. Such a re-balancing, indeed, would put an end to a long period in which Americans were used to live beyond their means. It would require a drastic reduction of the budget deficit that is projected for the next decade (Cline, 2009), with inevitable cuts in expenditures and tax increases which would make the trade-off between butter and guns much more stringent than in the G.W. Bush's years. Moreover, it would

[32] On average, the deficit as percentage of GDP has been equal to 3.9 during the decade 1980-1989, 2.2 in 1990-1999, 1.5 in the period 2000-2008: this implies an average of 1.9 in 1990-2008 and of 2.6 in 1980-2008.

[33] These CBO projections differ from those provided by the Office of Budget and Management (OBM) because of diverse baselines (due to the different policies considered as current law) and technical assumptions. In addition, OBM projections are based on assumptions on the rates of GDP growth which look more optimistic of those used by the CBO.

[34] See President Obama's statements at the meeting of his Economic Advisory Board on November 2, 2009. See also Summers (2009).

imply that private consumption will persistently grow at a lower rate than GDP, which in its turn is expected to grow less than in 1995-2007. As argued in the financial press, the US may simultaneously reduce the fiscal deficits and limit domestic consumption by levying a tax on either value-added or consumption (as all other industrial countries do), increasing individual income taxes (for instance by downsizing some tax deductions limiting the tax base), and targeting US firms' foreign income. However, it is legitimate to be quite skeptical about the possibility that these measures will be actually implemented by any Administration, given the high political price that it will pay because of them.

Fiscal adjustment would imply that government revenues go back to, and then beyond, pre-crisis levels: they dropped from 17.7% of GDP in FY2008 to 14.8% of GDP in FY2009, the lowest level in 50 years. Raising government revenues seems the most viable way for reducing the fiscal deficit since the overall effective federal tax rate declined from 22% of income in 1979 to 20.5% in 2005 and the mere expiration of some tax reductions would increase individual income taxes in the next 10 years. But higher taxation remains largely unpopular. It is not by chance that the President's budgetary proposals for the FY2011 make individual income revenues grow more slowly than under unchanged legislation. Similar considerations apply to a reasonable shift from progressive income taxation toward regressive consumption taxation. In other words, changing the domestic tax system so as to reduce both domestic private consumption and government deficits will be hardly achieved: the current structure of the US government revenues has deep roots in the US society.[35]

An important issue, yet oddly marginal in the current debate on the US rebalancing, is the fact that a growth model less dependent on domestic demand and more oriented toward exports would bring about a relative shrinking of those sectors producing non (internationally) tradable goods and services that are particularly labor intensive. This is confirmed by looking at the average share of compensation accruing to labor and capital services over the period 2000-2007 in the diverse sectors of the US economy (see also Cova et al., 2009). The shares accruing to labor in the nontradable service sectors (accounting for three quarters of US employment) are in the range 70%-90%, whereas the average shares in the tradable manufacturing and agricultural sectors are respectively 65% and 55%.[36] This point is particularly relevant considering the sectoral composition of US employment, as revealed by the plot in Figure 7. In 2008, the share of manufacturing in the non-agricultural employment was less than 10% (down from 16% in 1990) while the shares of trade,

[35] On average, over the fiscal years 2003-2009, 44% of the revenues came from individual income taxes, 11% from corporate income taxes, 37% from social insurance.

[36] For these calculations we used the dataset EU KLEMS Growth and Productivity Accounts (November 2009 Release) discussed in O'Mahony and Timmer (2009).

services, and (Federal, State and local) government were, respectively, 15%, 46% and 16% (17%, 38% and 17% in 1990). It is thus highly unlikely that a structural adjustment increasing the relative importance of the tradable sectors may have a positive impact on employment.

It is worth recalling that the US Bureau of Labor Statistics (BLS), although taking into account the short-term depressing effects of the economic crisis and other structural changes affecting the US economy over time, does not project for the next decade any major changes in the sectoral composition of employment. The BLS projections for employment over the period 2008-2018, presented in the November 2009 issue of the Monthly Labor Review, are drawn against an underlying macroeconomic background that reflects little (if any) change with respect to the recent past. Personal consumption expenditure is projected to continue its growth, even though at a slower rate than in the past decades, thus passing from 67% to circa 70% of nominal GDP, contributing for three quarters of the annual 2.4% growth rate in real GDP forecasted over the period 2008-2018. Moreover, service-providing sectors are expected to generate the great majority of the new jobs from 2008 to 2018.[37] As a result, employment of wage and salary workers is expected to grow by 11% (14 million) only in the high-skilled service sectors (in particular, professional and business services +14%, health care and social assistance related jobs +24%) and in the construction sector (+19%), while it is expected to decline in all good-producing sectors (manufacturing -9%, mining -5%) because of stiffer import competition, ongoing relocation of activities and jobs overseas, and further labor efficiency gains achieved at the firm level.[38]

Beside the skepticism about the US policy makers' political strength and determination to voluntarily renounce to the short-term advantages coming from the foreign willingness to finance the US excess expenditures in order to face the unpopularity associated with a growth rebalancing, it is not clear what part of the world could provide the additional demand that would allow the United States to steadily increase its net exports so as to stabilize its current account deficit/GDP ratio at a level deemed sustainable in the long run,[39] without persistently slowing down its growth

[37] Most of the aggregate projections would not change much if 2007, instead of 2008, were chosen as base year. However, the reduction in the employment of wage and salary workers in the manufacturing and mining sectors would be larger, and the increase in the construction sector smaller. See Bartsch (2009), table 1.

[38] It is worth pointing out that these projections build on the plausible assumption that only the older age population group will increase its participation to the labor force. In terms of the population above 16 years old, people with more than 55 years will pass from 30.2% in 2008 (26.6% in 1998) to 35.4% in 2018 when the age of baby boomers will be in the range 54 and 72 years. In terms of civilian labor force, the share of 55-years-and-older workers will pass from 18% in 2008 (14% in 1998) to 24% in 2018. It follows that the relative contribution of low-skilled labor force is unlikely to decrease rapidly in the next few years.

[39] A consensus estimation of this sustainable level is 3%, namely approximately 3% points lower than its pre-crisis level.

and the growth of the world economy. Nor the other advanced countries neither the emerging countries appear to be willing in the next future to manage their domestic demand so as to create room for a drastic and persistent reduction in the US external deficit. In particular, the successful performances of the emerging countries pursuing an export-led growth strategy, together with the recent experience showing the importance of counting on ample reserves in times of crisis, will probably contribute to increase worldwide the countries' desire to run external surpluses.[40]

4. Conclusions

At the core of the growth process that has characterized the world economy in the years preceding the crisis of 2008 there have been the high US consumption rate and the high Chinese exports and investment. This process was made possible by unprecedented high rates of debt accumulation on the part of US households and unprecedented high saving rates on the part of Chinese households. As the unsustainable rise of the US private debt triggered the crisis, the direct and indirect transformation of relevant portions of private debt into public debt has become a pillar of the US authorities' strategy for driving the economy out of the crisis. Under this respect, it is not superfluous to stress how important has been the worldwide trust in the creditworthiness and long-term solvency of the US government to avoid that the mass defaults of private debtors ignited a systemic collapse.

As a matter of fact, this transformation of private into public debt has been necessary for restoring the households' capacity to spend and bringing again the US economy on a growth path. In a longer term perspective, as we have argued, it is unlikely to expect a consistent set of policies aiming at a structural rebalancing of the US growth model away from consumption and the non-tradable sectors of the economy, because of the high economic and social adjustment costs—and the consequent political unpopularity—that they would imply. If some re-orientation in that direction of the US economy will occur, it will be under the pressure of forces that will make it inevitable, possibly because of the increasing unwillingness of foreign investors to finance large US external deficits.

It is apparent how crucial is for the Unites States that foreign central banks and sovereign funds will be willing for the next years to absorb rising quantity of US government securities. Although with some reluctance and after warning the Unites States of not abusing of its position for inflating away its foreign debt, there is evidence that China's official sector has been making its part and it will continue to accumulate US government bonds. It is true that at least in the short term this

[40] Under this respect, the point made here is not affected by the fact that emerging countries' consumption has now approximately reached US consumption (each totaling about 30% of global output, see Hensley et al., 2009).

choice has not alternative if the Chinese authorities want to preserve the value of their past investment in US financial assets, but it also signals—together with the refusal of accelerating the appreciation of the renmimbi versus the US dollar—the awareness on the part of the Chinese ruling elite that a drastic abandonment of the export-led growth strategy followed until now is premature, risky and at odds with what they perceive are China's long-term interests. In other words, it is likely that the Chinese leadership will partially reassess its development strategy only to the extent that this is made inevitable by the gradual restriction of the possibility for China to feed its growth by relying on external demand and by keeping a high rate of capital accumulation. Indeed, those suggesting that China's growth should rely much more on domestic consumption should not forget that the compression of consumption has been instrumental in recent years to keep the rate of capital accumulation as high as possible, thus accelerating the growth process. Boosting consumption in China would require a remarkable increase in real wages and a pervasive diffusion of welfare entitlements. This would rapidly raise the cost of labor and depress the return on investment. Consequently, the rate of capital accumulation would be inevitably reduced, with obvious implications for economic growth.

It should not be surprising that the Chinese ruling elite is reluctant to implement major changes in a set of policies that were so successful in keeping high the country's rate of economic growth, which remains the policy makers' primary objective. This notwithstanding, a growth rate around 10% per annum is not sustainable for China in the post-crisis global scenario: the fact that China's share of world GDP is rising so rapidly and the ineluctable effects of the law of decreasing returns on capital investment, together with the impossibility for the United States to run external deficit of the extent that was normal in the pre-crisis, make very likely that China's long-run growth will slow down. In combination with the reduced US capability of playing the role of "world consumer of last resort", the slowdown of China's growth will have inevitable effects on the global economy. If public opinions and policy-makers of the major countries will not accept that after the crisis the world economy will enter a prolonged period of slower growth and they will then attempt to accelerate growth by expansionary fiscal and monetary policies, it will be high the risk of a new and possibly more devastating global economic collapse, especially considering that with the current crisis most governments around the world have almost entirely exhausted their space for intervening to bail out the economy.

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Figures

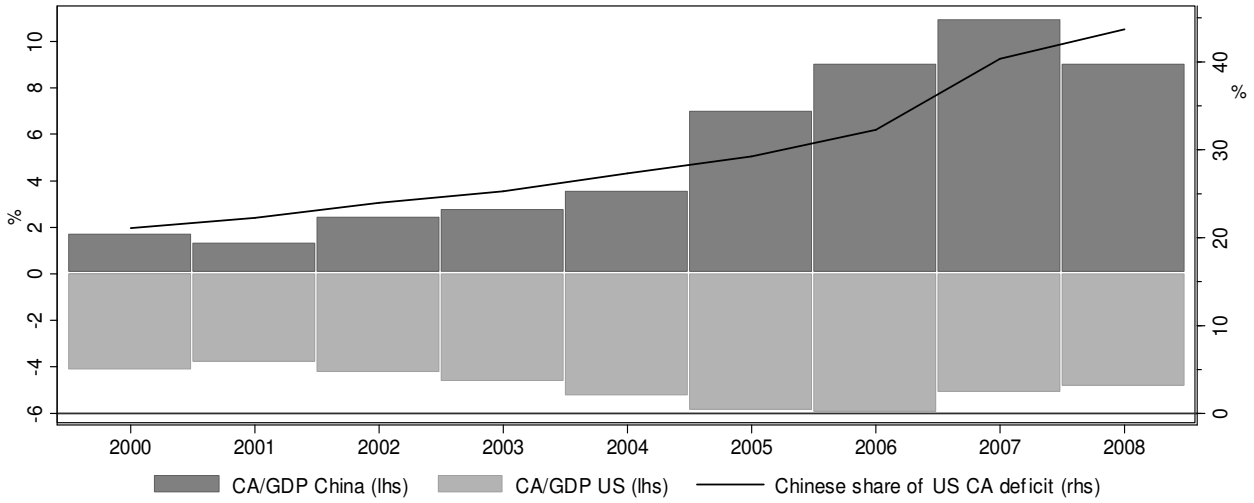

Figure 1. Current account balances - ratio of GDP- of the US and China (lhs). Chinese share of US CA (rhs). Sources: IFS, OECD and BEA

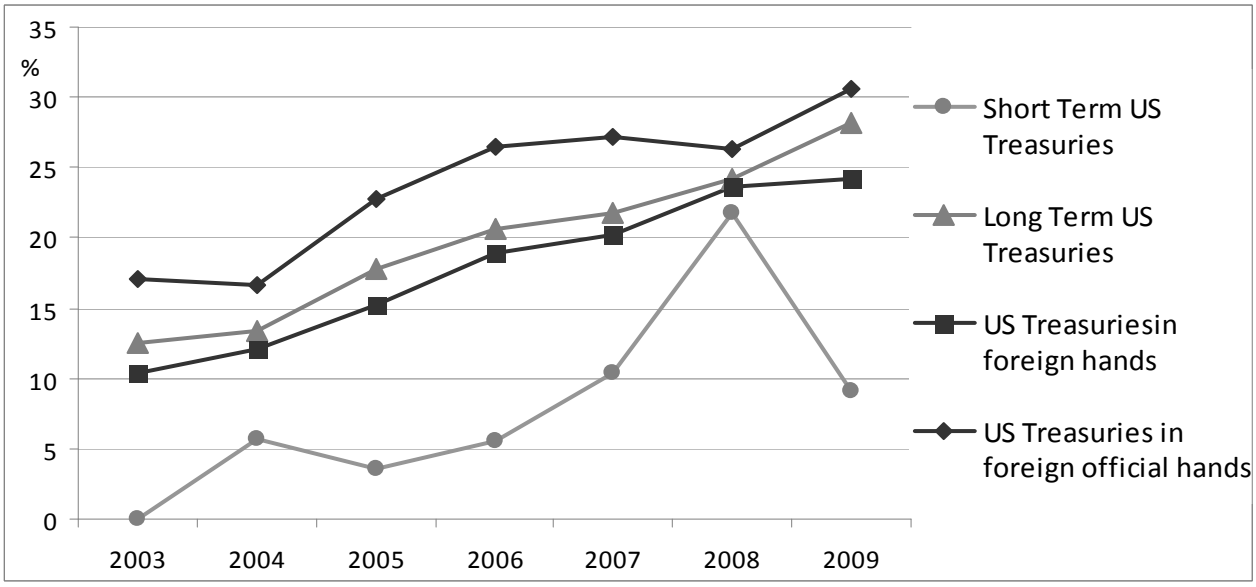

Figure 2. Chinese share of foreign-owned Treasuries (%). Sources: US Treasury (TIC), end of the year data.

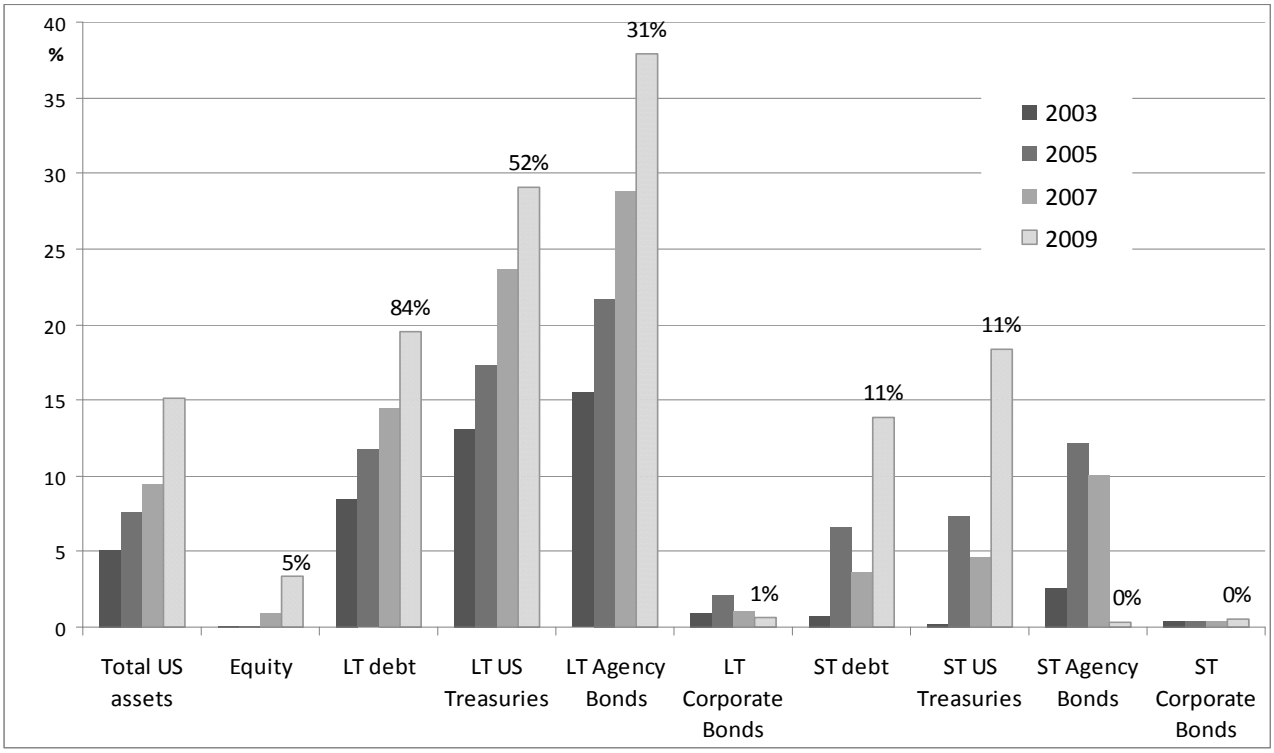

Figure 3. Chinese share of foreign-owned US assets (%) by type. Relative share of each type in the Chinese portfolio in 2009 (% over the 2009 bars). Sources: US Treasury (TIC), data at June of each year

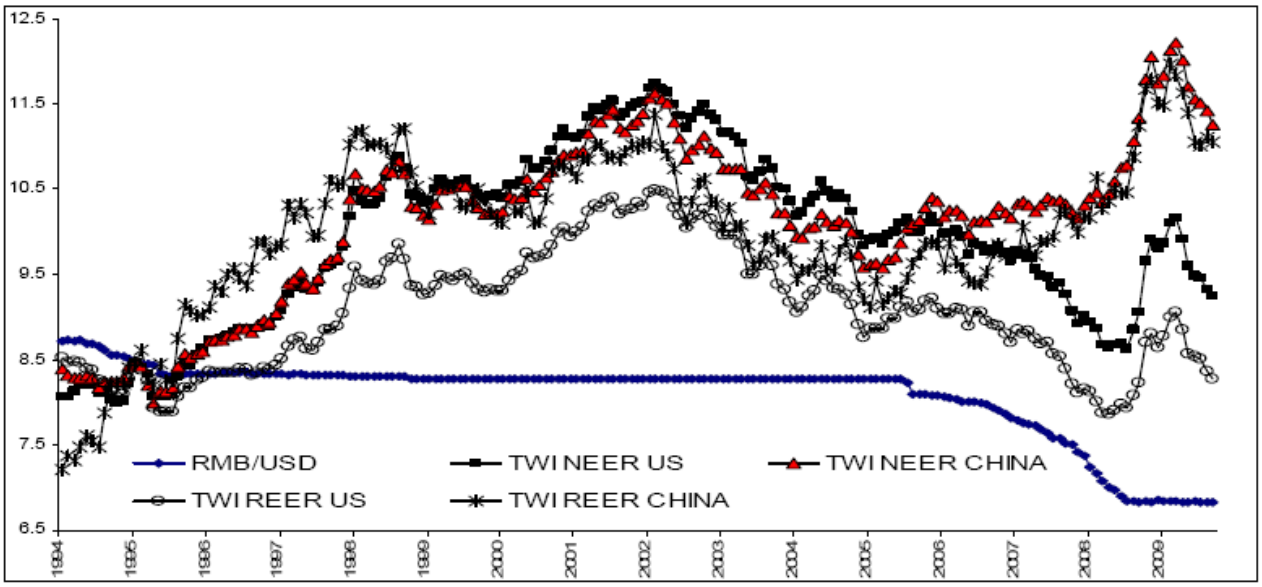

Figure 4. China and US exchange rate indices (January 1995 = 8.46). Sources: Board of Governors of the Federal
Reserve System (RMB/USD) and BIS (broad effective exchange rate indices).

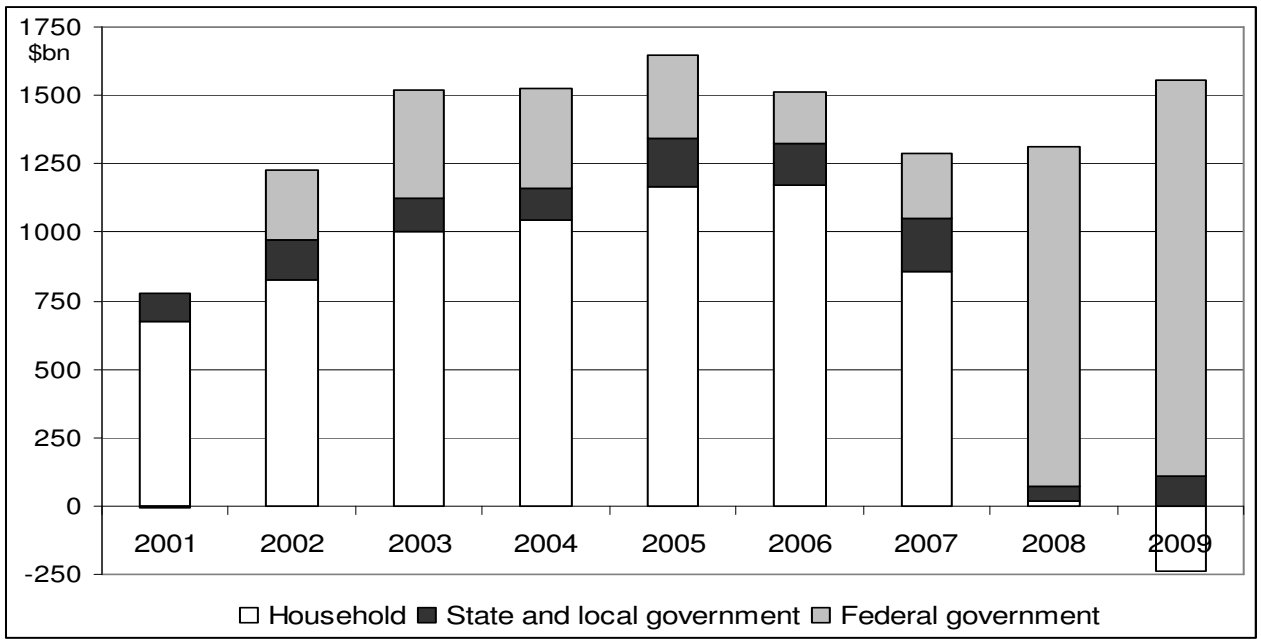

Figure 5. US borrowing needs by sectors: Households, Federal and State and Local Government. Sources: Federal Reserve System, Flows of Funds, Table D.2.

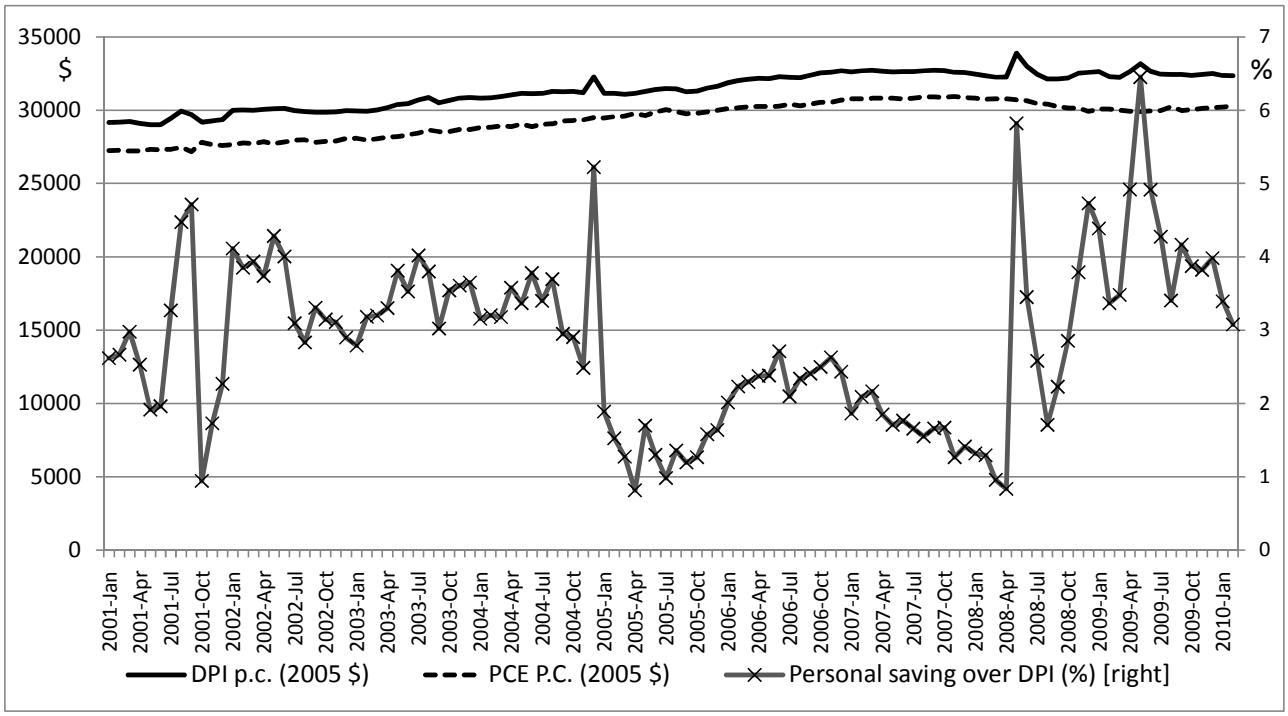

Figure 6. Disposable personal income (DPI) and Personal Consumption Expenditure (PCE) per capita in chained 2005 dollars [left axis]; Personal saving over DPI (percent) [right axis]. Jan 2001-Feb 2010. Source: BEA, 29 March 2010

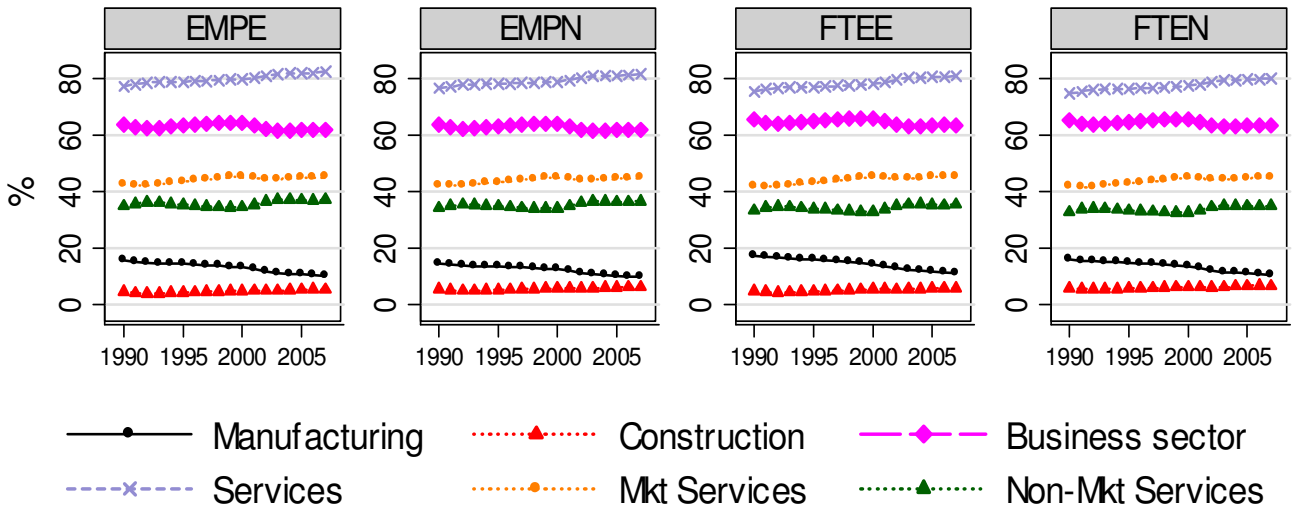

Figure 7. Sectoral shares 1990-2007 in (form the left): Employees (EMPE); Total Persons Engaged (EMPN); Full-time Equivalent Employees (FTEE); Full-Time Equivalent Engaged (FTEN). Source: OECD STAN[41]

[41] Non-market services include "Community, Social and Personal Services (code C75T99) and Real estate activities (code C70). Market services include all the others.

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